

DISCLAIMER: These Standard Operating Procedures (SOP's) are for the exclusive use of Navy Public Works Center (PWC) Norfolk. They are promulgated as guidance for their NAVFAC Commands. If intended to be used by other activities, they must be tailored to each activity's particular requirements and must be reviewed/approved by the activity's safety professionals prior to use.

Standard Operating Procedures
Inspection and Maintenance of 6 X 6 Pumps

PPE Required:

- Safety glasses
- Leather gloves
- Hearing protection

Equipment Required:

- Pump inspection forms
- Battery jumper cables
- Tire pressure gauge
- Vacuum adapter gauge

References:

- 1. PWC Occupational Safety and Health Program Manual, PWCNORVAINST 5100.33E

Procedures:

1. Transport required inspection materials and equipment to the pump site.
2. Roll back protective cover on the pump.
3. Inspect the pump for the following:
 - a. Visible damage to the exterior surfaces of the unit.
 - b. Fuel, oil, and coolant leaks.
 - c. Condition of tow ring, locking device (lock must be installed), trailer lights, wiring connector, and wiring.
 - d. Tires for cuts, damage, leaking, tread wear, minimum tread depth of 1/32", air pressure of 35 to 40 PSI. Service tires, if required.
 - e. External painted surfaces for rust and peeling paint.
 - f. Engine control panel for broken gauges, missing fasteners, etc...

g. Throttle control rod for freedom from rust and ease of operation. Clean rod with crocus cloth and lube with light oil, if required.

h. Battery for corrosion and security.

i. Engine oil level, radiator coolant level, and fuel tank level. Add fluids as required. If fuel tank is less than 1/2 full, arrange for refueling.

j. Cleanliness of the unit (dirt, oil, grease, etc...). Clean as required.

4. Immediately report, by radio, any missing units or damage that may have been caused by an accident or mis-use.

5. Start the engine using the following steps:

WARNING: Do not attempt to start the engine with ether at any time.

a. Ensure the throttle control is at the lowest RPM setting.

b. Start engine by inserting key and turning key clockwise while holding in the start switch below the key.

c. Let engine idle for at least two minutes.

d. Increase RPMs to 1800 and run engine for a minimum of five minutes.

6. If the engine does not start due to a dead battery, refer to SOP 621.3 SAN 25, Jump Starting Fuel Operated Engines.

7. After the engine has started, check the operation of the motor and pump for the following:

a. Smooth engine operation after 4 to 5 minutes of warm-up.

b. External oil and coolant leaks.

c. Proper operation of the self-prime system. Install vacuum adapter and ensure a minim of twenty pounds of vacuum.

d. Run engine 10 or more minutes and ensure the battery is re-charged. A 20 minute run time is required during winter to ensure battery re-charging.

8. Stop the engine using the following steps:

a. Prior to shut down, lower engine RPMs to idle for two minutes.

b. Turn key clockwise (?) and remove it from the key socket. (Clockwise is the same direction for starting the engine.)

9. Engine oil and filters should be changed every 250 hours of operation and, at a minimum, at least once annually. To determine if this maintenance is required use the following steps:

a. Note the date and engine time of last oil change (written on the oil filter).

b. Read the current engine time off the gauge.

c. Subtract the engine hours of the last oil change from the current engine time.

d. If the resultant hours from (c) exceeds 250 hours, then maintenance is required.

e. If the resultant hours from (c) does not exceed 250 hours, but if one year has elapsed since the last oil change, then maintenance is required.

f. If either steps (d) or (e) indicate maintenance is required, write a work order for the Transportation Department to change oil, oil filter, fuel filter, and air filter on the unit.

10. Engine coolant should be changed annually, in October of each year.

11. Record the resultant hours and all discrepancies in the 6X6 pump inspection forms.

12. Re-place the protective cover.

13. After returning to the office, update the status board with the hours and locations of each unit.